REMARKS

Reconsideration is respectfully requested.

With respect to the objection regarding the oath, Applicant respectfully suggests that the original oath filed on August 28, 2003 is a listing of prior filed foreign applications that were indeed filed more than 12 months prior to the filing of this U.S. application. However it should be noted that applicant does *not* claim priority based on any of these prior filed, commonly owned foreign applications.

With reference to the prior art effect under 35 U.S.C. §102(d) of these applications, it is respectfully suggested that only German application No. 10153273, filed on October 29, 2001, has prior art effect as a result of its date of issuance as German Patent No. DE 101 39 323 on December 5, 2002. It is noted that the other foreign filed applications each issued only after the filing date of this application, and thus have no prior art effect under 35 U.S.C. § 102(d) or any other section of the statute.

Applicants base their claims on and recite elements in the present claims relating only to subject matter that is restricted to a single embodiment herein, that is, the embodiment that is illustrated in Fig. 3 and described at pages 8-9 of the application as filed. It is noted that the claims of this application are considered patentable over both the German Patent No. DE 101 39 323 and the prior art relied upon in the Office Action dated January 21, 2005, as discussed below.

By this amendment, Claims 1, 17, 18 and 19 have been amended to overcome the asserted indefiniteness regarding discrepancies in the terms "oppositely disposed

ends" and "the opposite ends thereof." In all four claims, the ends are now consistently recited as "oppositely disposed ends."

The rejection under 35 U.S.C. § 102(e) over Gerber et al. (Gerber et al.) is respectfully considered improper, in that each and every limitation recited in Claim 1 is not shown or described in the reference. Specifically, Gerber et al. do not teach or suggest connection contacts extending out of the plane of the *main surface* of the metal piece, nor that the connection contacts are applied *directly* to the metal piece, nor that the front and side surfaces of the connection contacts and metal piece are aligned, nor that the surfaces extend in planes that are parallel to each other. These aspects of the present invention are clearly shown in Figure 3 of the application, as resulting from following the process steps of the invention, and are recited in the claim limitations of the independent claims as "said front surfaces of the metal piece and of the connection contacts and said side surfaces thereof which abut perpendicularly against said front surfaces being aligned with each other perpendicularly to the plane of the main surface of the metal piece". In contradistinction, Gerber et al. disclose a chip or SMD resistor comprising connection contacts electroplated onto pads that are somehow fixed to the *front and back* surfaces of a metal piece, with surfaces that are *not* aligned with the surfaces of the metal piece, see Figures 1 and 2 of Gerber et al.

Additionally, none of the references explicitly disclose the limitation recited in Claim 2, wherein the resistance value of the resistor having the limitations of Claim 1 is between 0.5 mΩ and 5.0 mΩ. This results from the types of devices for which the resistors are to be used. For example, the air bag of the '502 patent does not disclose

the recited milliohm range of ohmic resistance, because of the sudden heat rise required in such a device. That is, the air bags of the 'Gerber et al. require much greater resistance values in order to obtain the desired "explosion", so as to ignite a gas generating pyrotechnic.

It is noted that the rejection of Claim 2 cites to Gerber et al., Column 3, lines 45-65. However, it is respectfully submitted that the disclosure of 6 mΩ fails to meet the limitation in Claim 2 of the range up to "approximately 5.0", since the difference is well over 20% in resistive capacity. In any case, the cited reference fails to meet the recited limitation, and thus cannot anticipate the invention as the reference is applied.

The rejections under 35 U.S.C. § 103(a) over Gerber et al. in view of the Smejkal et al. (Smejkal), Robbins (Robbins), Helgeland (Helgeland) and Szwarc et al. (Szwarc) references relied upon in sections 7 and 8 of the Office Action are also respectfully considered improper. Under Smejkal, in contrast to electroplating application of the contacts as is recited in the claims of the present invention, the strip of contact material and the strip of resistive material are cladded to each other by rolling under extremely high pressure. Also, Smejkal et al. disclose cutting away individual resistors from a long strip of cladded resistive and contact material by way of stamping (Fig. 6A and col. 4, lines 6-17). Stamping does not create precisely aligned edges in accordance with the teachings of the present invention, and the Smejkal et al. do not disclose cutting all four edges of the resistor by sawing or by a laser beam, and thus fails to teach the alignment feature at all four edges, as required by the present claims. Smejkal et al. teach only a laser beam for cutting slots 54, 56 along the serpentine path 58, as shown in Figure 5

(see col. 3, lines 29-33). Thus, it is respectfully submitted that Gerber et al. taken in combination with the cited secondary references, including Smejkal et al., fail to teach the claimed invention.

Robbins discloses a method in which only an insulating ceramic substrate 15 is cut apart by using a laser or a diamond saw (col. 4, lines 6-15) in order to produce the insulating wafer 41 of the resistor as shown in Figure 3 of Robbins. However, since no edges of the resistor layer 59 are cut in the manner disclosed and claimed, the alignment feature required by the claims of the present invention is missing. That is, the surfaces are not taught to be perpendicular to the plane of the main metal piece surface. Furthermore, applying the sawing feature to the invention of Gerber et al. would not result in a device of the presently claimed invention for the same reasons that the § 102(e) rejection relying on Gerber et al. is respectfully traversed, see above.

Helgeland does not disclose any chip or SMD resistor, but rather discloses the encapsulation of film resistors comprising an extremely thin (col. 2, line 27) resistive coating deposited on a substrate by screening, evaporation or sputtering with spaced-apart electrode terminals deposited on top of the resistive film (col. 1, lines 36-48). Helgeland discloses cutting by saw, but again, applying saw cutting as taught by Helgeland to the teachings of Gerber et al. does not result in a resistor as presently claimed.

As to Szwarc, the Szwarc '234 reference cited on the List of References Cited (Form PTO-892) fails to illustrate a Fig. 4, and the rejection is improper on that ground alone. In the interest of expediting the examination of this application, however,

Applicant has assumed that the rejection in fact relies on Szwarc et al. (U.S. Pat. No. 5,999,085) which does illustrate a Fig. 4. Applicant requests the opportunity to properly respond to this rejection in the event that that assumption is incorrect. With reference to Szwarc '805, therein is disclosed a resistor of a type that is very similar to that of Gerber, as the copper contacts 16, 18 are applied to "each side of a resistive strip" 12 (col. 1, lines 56-59), and moreover, are applied by welding, rather than by being electroplated on a main surface thereof in accordance with the claims of the present invention. The cited resistors are also produced by stamping or punching (col. 1, l. 46-50 and l. 62-64; col. 2, l. 33-49). Stamping or punching does not result in the desired alignment, as discussed above. A laser is again only used for trimming (col. 2, l. 36), and not fur cutting the pieces.

For the above reasons, it is considered that the claims, as amended, find support in the application specification as filed, and that the combination of elements recited in the pending claims, as amended, distinguish over the references of record. Accordingly, reconsideration and withdrawal of the outstanding rejections are

respectfully requested and an indication of allowable subject matter is earnestly solicited.

Applicant respectfully requests the opportunity to conduct a telephone interview to further discuss the claims of this application and the manner in which the claims distinguish over the prior art references applied in support of the rejections.

Respectfully submitted,

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